



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:)	Confirmation No. 3384
)	
John W. HARMON)	Group Art No. 1635
)	
Serial No.: 10/540,934)	Examiner: Jane Zara
)	
Filed: February 24, 2006)	Docket No: 001107.00550
)	
For: Wound Healing Method and Kits)	

DECLARATION UNDER RULE 132

U.S. Patent and Trademark Office
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Sir:

I, John W. Harmon, am the named inventor of the subject application. I declare:

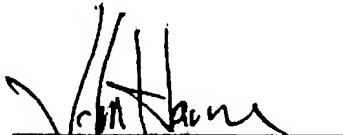
1. I am a Professor of Surgery at the Johns Hopkins University School of Medicine and the Director of Surgical Research at Johns Hopkins Bayview Medical Center. I earned a medical degree at the Columbia University College of Physicians and Surgeons in New York and received surgical training at the Harvard University Medical School in Massachusetts.
2. I have reviewed the results of Lee et al., published in "Electroporative delivery of TGF- β 1 gene works synergistically with electric therapy to enhance diabetic wound healing in db/db mice," *J. Invest. Dermatol.* 123: 791-198, 2004.
3. I believe that the data reported in Figures 2, 4, and 7 demonstrate synergistic effects between transfection with a polynucleotide encoding TGF-beta 1 and intradermally administered electrical fields.
4. I believe that the extent of the synergy is significant and should have significant positive ramifications in the clinic for improving wound healing in patients.
5. I have reviewed the data that are reported in Lokmic et al., "Time course analysis of hypoxia, granulation tissue and blood vessel growth, and remodeling in healing rat

1-24-08 *John W. Harmon* 1/2

cutaneous incisional primary intention wounds," *Wound Rep. Reg.* 2006, 14: 277-288.

6. Those of skill in the art as well as non-medical individuals have observed that wound tissue and normal skin tissue are very different. Lokmic systematically characterizes many differences between these two tissue types. Lokmic documented differences in areas of hypoxia in the two tissue types. Lokmic documented differences in the degree of vascularity between the two tissues. Lokmic documented differences in the proliferation of normal cells and wound tissue. Lokmic documented differences between normal skin cells and wounded tissue in the number of apoptotic cells. Lokmic also documented the difference in vascular endothelial growth factor-A (VEGF-A) expression and vascular endothelial growth factor receptor-2 (VEGFR-2) expression between the two types of tissue. Lokmic further documented differences in amount of alpha-smooth muscle actin (α -SMA) and transforming growth factor-beta (TGF- β). Thus Lokmic shows that normal skin and wounded skin are different by a number of important biological and biochemical criteria. These data confirm our common knowledge and common sense experiences of the differences between normal skin and wound tissue.
7. Because of the very large and important differences between wound tissue and normal skin, one of ordinary skill in the art would not have had a reasonable expectation that a process that may have been successful in normal skin would be successful in wound tissue. Moreover, the extent of effect on wound healing could not have been predicted.
8. All statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

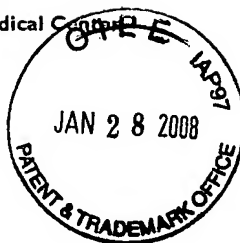
1.24.08
Date


John W. Harmon, M.D.

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John W. Harmon, M.D.
Professor of Surgery
Section of Surgical Sciences

The Johns Hopkins Bayview Medical Center
4940 Eastern Avenue
Baltimore, MD 21224
410-550-0401 / Fax 410-550-1245
email: jharmon@jhmi.edu
website: www.jhbmc.jhu.edu/surgery



For Sarah Kagan

Please confirm that
scanned document
arrived. Thank.

John H